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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,994	01/22/2002	Jim Hunter	8229-018-27 CIP	2175

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EXAMINER	
AMARI, ALESSANDRO V	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,994	HUNTER ET AL.	
	Examiner	Art Unit	
	Alessandro V. Amari	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

37 C.F.R. 1.608 (b) Declaration

1. The declaration filed on 22 January 2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the Hawkins US Patent 6,233,087 reference.

2. The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Hawkins reference.

In order to show prior invention, the Applicants must provide facts sufficient to show reduction to practice prior to the effective date of the Hawkins reference. In order to show actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose. See MPEP § 2138.05. None of the exhibits provided in the declaration provide any test results or other demonstrable facts to show that the device will work for its intended purpose.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-8 and 10 stand rejected under 35 U.S.C. 102(e) as being anticipated by Hawkins et al US Patent 6,233,087.

In regard to claims 1 and 4, Hawkins et al disclose (see Figures 1 and 2) a reflective light processing element, comprising a substrate (52); a dielectric layer (58) formed on the substrate; a conductive trace (60, 62, 64) formed on the dielectric layer, the conductive trace allowing charges trapped in the dielectric layer to escape wherein said trapped charges are present at least on the surface of the dielectric layer as described in column 5, lines 41-60 and column 6, lines 15-50; and a plurality of ribbons (72a, 72b) formed above the substrate and the conductive trace wherein each of said ribbons comprise a top surface that is reflective and said reflective surfaces exhibit the same degree of reflectivity as described in column 6, lines 51-62 and as shown in Figure 2.

In regard to claim 5, Hawkins et al disclose (see Figures 1, 2 and 6) a high contrast grating light valve comprising a silicon substrate as described in column 4, lines 63-65; a protective dielectric layer (58) formed on the substrate; a first set of ribbons (72a) each with a first average width Wa and a second set of ribbons (72b) each with a second average width Wb, wherein the ribbons of the first set alternate between the ribbons of the second set and one of said first and second set of ribbons is configured to constructively and destructively interfere with an incident light source having a

wavelength X; wherein said substrate comprises a silicon wafer protected by a dielectric layer as shown in Figures 1 and 2; and a conductive trace (60, 62, 64) formed at least partly on the protective layer and in electrical contact with said substrate, allowing charges trapped in the protective layer to escape wherein each of first and second set of ribbons comprise a top surface that is reflective and said reflective surfaces exhibit the same degree of reflectivity as described in column 5, lines 41-60 and column 6, lines 15-62.

Regarding claim 2, Hawkins et al disclose that said trapped charges are present at least on the surface of the dielectric layer as described in column 5, lines 41-60 and column 6, lines 15-50.

Regarding claim 3, Hawkins et al disclose that said trapped charges are formed, with respect to the dielectric layer, during operation of said reflective light processing element as described in column 5, lines 41-67 and column 6, lines 1-50.

Regarding claim 6, Hawkins et al disclose that said dielectric layer comprises silicon dioxide as described in column 7, lines 50-60.

Regarding claim 7, Hawkins et al disclose that said conductive trace is comprised of aluminum as described in column 6, lines 8-10.

Regarding claim 8, Hawkins et al disclose that the width $W_a >= W_b$ as shown in Figures 1 and 2.

Regarding claim 10, Hawkins et al disclose that the reflective surfaces comprise aluminum as described in column 8, lines 30-33.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins et al U.S. Patent 6,233,087 in view of Bloom et al U.S. Patent 5,311,360.

Regarding claim 9, Hawkins et al teaches the invention as set forth above that the top surfaces of the ribbons in said first set and the top surfaces of the ribbons in said second set have reflective surfaces as described in column 8, lines 16-33 and as shown in Figures 1, 2 and 6.

However, Hawkins et al does not teach that the surface between the ribbons of the first set and second set has reflective surfaces.

Bloom et al does teach that the surface between the ribbons of the first set and second set has reflective surfaces as described in column 5, lines 53-56.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to ensure that the surface between the ribbons of the first set and second set is reflective as taught by Bloom et al for the device of Hawkins et al in order to enhance the reflectance of the surface area so as to improve the performance of the grating light valve.

Response to Arguments

7. Applicant's arguments filed 27 April 2006 have been fully considered but they are not persuasive.

Applicants argue by way of Declaration under 37 CFR 1.131 that they actually made the product claimed and tested it prior to the effective date of the reference. The Applicants further argue that there is no requirement that actual test data showing the invention performed in the way it was intended accompany the declaration.

In response to the argument, the Examiner again directs the Applicants attention to MPEP 715.07, which shows the requirements for conception of the invention. One of the requirements is that the inventors must show reasonable diligence as evidence by actual reduction to practice. In order to show actual reduction to practice, the device must have been tested to show that it will work for its intended purpose. The Examiner wishes to cite the MPEP 2138.05 which states the requirements for actual reduction to practice, as follows:

> For an actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose, but it need not be in a commercially satisfactory stage of development. If a device is so simple, and its purpose and efficacy so obvious, construction alone is sufficient to demonstrate workability. *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860, 226 USPQ 402, 407 (Fed. Cir. 1985).

Furthermore, testing is required to establish an actual reduction to practice as set forth in MPEP 2138.05 as follows:

> "The nature of testing which is required to establish a reduction to practice depends on the particular facts of each case, especially the nature of the invention." *Gellert v.Wanberg*, 495 F.2d 779, 783, 181 USPQ 648, 652 (CCPA 1974)

Therefore, MPEP 2138.05 requires that the Applicant provide evidence of testing of the device to establish an actual reduction to practice.

The Applicants go on to argue that although the test was performed and the inventors and collaborators recall it being performed the report of the testing of the device in question is simply not in evidence and have been lost. The Applicants further state what documents do exist show that the device was fabricated and that they are not certain how the Examiner comes to the conclusion that the device so fabricated will not work. Furthermore, the Applicant assert that it is the Examiner's position that such devices do in fact work based on at least the disclosure of Hawkins. Finally, the Applicants invite the Examiner to identify that portion of the Rule that insists that documentary evidence must be supplied and how the Examiner comes to the conclusion that the device so constructed would not work since a device along these lines would be expected by those of ordinary skill in the art to work.

In response to this argument, the Examiner would like to state that no conclusions about the operability of the device have been made in this or previous communications to the Applicants. The Examiner must deal with FACTS, not conclusions. In this case, a fact that the device operated as intended was alleged by the Applicants by way of Declaration under 37 CFR 1.131, however, there has been to date no supporting documentary evidence to support this alleged fact. This is further clarified in MPEP 715.07, which pertains to the general requirements of facts and documentary evidence, the relevant passage being reproduced below:

> A general allegation that the invention was completed prior to the date of the reference is not sufficient. *Ex Parte Saunders*, 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883) Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, without a statement of facts demonstrating the correctness of his conclusion, is insufficient to satisfy 37 CFR 1.131.

Furthermore, 37 CFR 1.131 (b) requires that original exhibits of drawings or records, or photocopies thereof, accompany and form part of the affidavit or declaration or their absence satisfactorily explained. Furthermore, a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and thus does not satisfy the requirements of 37 CFR 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974) In summary, the burden is on the Applicant, not the Examiner to provide evidence demonstrating that the device operated as intended and therefore the rejection in regard to Hawkins is maintained.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (571) 272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ava
26 June 2006

DREW A. DUNN
SUPERVISORY PATENT EXAMINER

Approved
JANICE A. FALCONE
DIRECTOR
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